## Conservation of the Alaska Salmon.

The first salmon cannery in Alaska was established in 1878. From that time the salmon canning industry in the Territory grew in response to the increasing demand for the product and the availability of capital for expanding operations. The peak of production was reached in 1918 when 6,605,835 cases of salmon were packed. The pack in 1925 was smaller than in any preceding year since 1914, except for the year 1921 when, on account of the severe business depression, many cameries did not operate.

At the time of the passage of the Alaska Fisheries Act of June 6, 1924, the salmon fisheries of Alaska had reached a stage of depletion which called for immediate action. That this depletion existed was easily established and in no uncertain manner. The packs of canned salmon had been made in recent years only by ever increasing expansion of fishery operations. Gear had become more extensive in character and amount than ever before. For instance, in the salmon canning industry 288,736 fathoms of gill nets were used in 1915, compared with 332,820 fathoms in 1925. In 1915 there were operated in the industry 284 traps which took an average of 94,782 salmon each, while in 1923, 443 traps were operated with an average catch of only 77,269 salmon each. In 1915 the 85 canneries in Alaska produced 4,500,293 cases of canned salmon, while in 1923 the 130 canneries produced but 5,035,697 cases; in other words the increase of 53% in number of canneries resulted in an increase of only 12% in the pack.

Fishing operations had been extended to waters not before exploited, an example being the establishment of a cannery at the mouth of the Yukon in 1918. Waters which formerly had been very profitable fishing grounds

were becoming less and less productive or were yielding their former quotas only under most intensive fishing. The rapid exhaustion of the Copper River in Central Alaska was a notable example.

The fisheries act of 1924 was well suited to meet the pressing situation for which it was designed. While safeguarding the equal rights of all fishermen, it gave the Secretary of Commerce full authority for restricting the fishery operations to meet the needs of conservation and also set forth the policy to be undertaken for the reestablishment and maintenance of the fishery resources. The general policy for conservation was set forth in the provision that 50 per cent of the annual run of salmon was to be allowed to escape to the spawning grounds.

The procedure of the Department of Commerce under the new law has been to establish broad regulations sufficient to build up to its original size the runs of salmon and at the same time to hamper as little as possible the existing industry. The chief features of the regulations have been the establishment of close seasons, restrictions on the kinds and sizes of gear, restrictions on the take in certain waters, and the total prohibition on fishing in various areas where operations were especially effective in the taking of fish on their way to the spawning grounds.

The regulations are subject to change at any time whenever it appears either that further restrictions are necessary or that additional fishing may be allowed without detriment to conservation. In 1925 the poor run of salmon in Bristol Bay made necessary the immediate closing of the fishing season about the middle of July. On the other hand, the satisfactory condition of the run permitted a relaxation of restrictions in the Eodiak area and in other places.

While the reestablishment of the fishery resources will necessarily be a matter of years, evidences are abundant that the steps already taken have been along proper lines. Since the life cycle of the Pacific salmon varies from two years for one species to four or more for others, it is evident that reconstructive measures cannot immediately result in increased runs of fish. It is by observations at the spawning grounds where the efficiency of the regulations may be determined. Surveys of these grounds have been most encouraging.

For reft to the President

The law of June 6, 1924, gave broad and comprehensive power to the Secretary of Commerce to regulate and conserve the Alaska fisheries. The resulting regulations have had as their objective the upbuilding and maintenance of the fishery resources at their maximum capacity. The immediate output was of secondary consideration in so far as it was at variance with conservation. The restrictive measures were chiefly in the form of limited closed seasons, the total prohibition of certain forms of fishing gear, and limitations on the size and amount of such fishing gear permitted. In 76 specific places fishing for salmon was entirely prohibited.

A feature of the restrictive measures in 1925 was the requirement of a distance interval of  $1\frac{1}{2}$  miles between traps in the important Icy Strait-Lynn Canal district of southeastern Alaska. Previous to this the distance interval was 1,800 feet. In 1924, 76 traps were operated in this district, which took a total of 3,797,392 salmon, an average of 49,966 per trap. Under the further restrictive measures only 56 traps were operated in 1925, a reduction of 26 per cent. They took 2,951,177 salmon, an average of 52,700 per trap. Thus in 1925 nearly 850,000 fewer salmon were taken in these waters; this undoubtedly meant a larger escapement of fish to the spawning grounds.

In securing a 50 per cent escapement of salmon, as required by law, weirs have been constructed in a number of streams through which the fish escaping capture may be actually counted. As a result of counts made at weirs in the Chignik and Karluk Rivers in 1925, commercial fishing operations were suspended for certain periods in the adjoining waters by authority of the Department.

The tagging of salmon in Alaskan waters to determine the migration routes is of distinct benefit in working out measures for properly conserving the runs. No matter how complete the protection given immediately off the months of spawning streams, the runs will be in danger of depletion if intensive fishing occurs at various points along the route of migration before the fish reach the vicinity of the streams.

Distinct benefits have accrued through the more adequate policing of the waters to prevent violations of the laws and regulations. In 1925 nearly 200 persons were engaged and more than 20 patrol vessels were employed. The placing of guards at the mouths of important streams to prevent encreachments is particularly effective in securing a good escapement of breeding salmon.

At er near the conclusion of the fishing season in the fall of 1925 mumerous streams were examined by experienced representatives of the Department, and they have reported in many cases a splendid seeding of streams. This has been due directly to the regulations aimed to secure that result. Reports reaching the Department are to the effect that from persons living in various localities in southeastern Alaska, including hunters, sport fishermen and others, are to the effect that the escapements of spawning salmon are the best they have seen for years and in most cases remind them of old times.

On the other hand, there are reports of regions where the escapement of salmon has not been sufficient to meet the requirements. This is particularly true of the important red salmon fishery in the Bristol Bay region where drastic measures were necessary to curtail further fishing. Subsequent examinations of the spawning grounds justified the course pursued, for there was an insufficient escapement of salmon. Further

restrictive measures in this region, as well as in other waters, will be necessary.

Not only is it the aim of the Department to see that there is full compliance with that requirement of law of a 50 per cent escapement of salmon, but it is the aim and practice also to require and secure a greater escapement in those instances where depletion through overfishing or for natural causes necessitates such action. In short, the sole objective is to reestablish the runs of salmon and maintain them upon their highest possible level. At the same time it is the Department's policy to stimulate the fullest use of Alaska's fishery resources, consistent with requirements of law and the necessities of conservation.

This is conservation in its highest sense.

The new and comprehensive act of 1924 and the broad regulatory authority which it gives to the Secretary of Commerce assure the future welfare of the fisheries of Alaska. Definite progress has already been made, continued beneficial results will follow, and eventually there will be full restoration of the former abundance of salmon in Alaskan waters.